

21st Century Universities: Campuses Or Business Parks?

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ABSTRACT

The COVID-19 pandemic has caused massive disruption to business as usual across all industries, including education, and there is a growing consensus that the higher education (HE) sector may never go back to 'business as usual'. While universities are now developing strategies for 2030, several management consultancies are projecting a very challenging HE landscape in the next decade. Suggestions, from the death of the normal university campus to shutdowns, mergers and collaborations are widely predicted including new opportunities for growth. University administrators should develop innovative strategic plans to address the challenges and harness the growth opportunities. Although other industries have faced such disruptions and have coped with responses such as partnerships and mergers, it may be time for universities to reconsider business models for the future. The strategies adopted in the aviation industry have been used to recommend a way forward for universities.

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The purpose of this paper is to contribute to the dialogue on the future of universities, especially the university campuses. The higher education sector has been shaken by the pandemic (Purcell & Lumbreras, 2021), exposing the fragility of its operating model. While there are concerns about the future of higher education, the post-COVID education landscape is anticipated to be one of high growth (Evans-Greenwood et al., 2015; EY, 2021; KPMG, 2020; PWC, 2020). Universities must develop strategic plans by assessing the external environment to address the immediate challenges and to capitalise on the projected growth. A framework of ‘mobilise, stabilise, and strategise’ as proposed by PWC (2020) is applied to suggest short-, medium-, and long-term strategies for universities. While appropriate short- and medium-term strategies will help stabilise universities, careful planning based on robust ‘what if’ scenarios is essential for long-term survival and growth. The ‘what if’ scenarios projected by EY (2021) have been adopted as a base for suggested long-term strategies in relation to the three key areas of a university: teaching, research, and buildings. Although the higher education sector is experiencing this upheaval now, other industry sectors have previously been exposed to similar upheavals and have coped by adopting various strategies. This article draws a comparison between the higher education sector and the aviation industry in extrapolating potential operating models for universities. The switch to new operating models may be the key to the survival and progression of many institutions.

Strategic Management Theory

Strategic management has been defined by Nag et al. (2007, as cited in Jasper & Crossan, 2012) as the initiatives to enhance organisational performance in the external environment. In recent years, Australian universities have experienced several challenges that were further exacerbated by the effects of the pandemic, creating an imperative for universities to examine strategic and operating models. The process of developing strategies follows three basic steps: environmental appraisal, strategy formulation, and strategy implementation (Jofre,

2011). Managers can use various tools such as SWOT, PEST, and competitor analysis to conduct environmental scanning. Based on the intelligence gathered, multiple strategies are formulated at corporate, business, and functional level. Finally, the chosen strategy is implemented (Jofre, 2011). For the purposes of this article, focus is mainly on the first two steps of the strategic management process instead of applying any of the strategic management theories. The Political, Economic, Social and Technological (PEST) tool is adopted to assess the threats and opportunities in the HE environment. Corporate level strategies are suggested to address these challenges and exploit the opportunities, based on 'what if' scenarios. These are expected to provide direction to university administrators to conduct further detailed analysis based on the preferred strategic management theories, such as Resource-based theory or Agency theory (Hitt et al., 2021).

The higher education environment in Australia

The PEST (Sammut-Bonnici & Galea, 2014) analysis of the factors impacting the higher education sector highlights a range of issues that were plaguing the sector before the pandemic. Politically, on the domestic front, the sector has been impacted by the reduction in funding from the federal government, caps on student places, and the Australian government's new Job-ready Graduates Package, supporting some disciplines over others (Howard, 2021). Externally, the relationship between Australia and other countries impacts the sector in the form of the number of international student enrolments, as already seen in the U.S. because of domestic politics and the trade war with China (Ghosh et al., 2021). This is one factor of concern, especially considering the current tensions between Australia and China, where most international students come from (Thatcher et al., 2020).

Economically, the flow-on effect of the reduction in funding has been the rise in the cost of delivering undergraduate and post-graduate courses, impacting the cost of university degrees for domestic and international students (Ghosh et al., 2021), which has triggered students to look for alternatives.

Socially, the traditional demographics of university students (Rubin, 2013) have changed, with a higher number of mature age students undertaking university study. This trend is only expected to rise. We are already seeing the trend of anytime, anywhere access to education that needs to fit around students' lifestyles.

Technologically, there has been a massive disruption to the traditional business model of universities with the advancements in telecommunications and internet technologies (Rubin, 2013). Content is freely available for users to consume, anytime, anywhere, via multiple devices, based on their interests and objectives. Several educators are developing Open Education Resources (OERs) (OER Commons, 2021) for teaching courses and/or modules that are shared with students, and are freely available to other institutions. There has also been a movement toward Zero Textbook Costs (ZTC) (CUNY, 2021) helping to alleviate education costs for students (OERu, 2021), which according to Ghosh et al. (2021) is an important factor for students and their families. Over the last decade there have been new delivery models such as the Massive Open Online Courses (MOOCs) that offer free content and charge only for certification. These types of platforms are only expected to grow.

The new strategic documents and plans released by universities focus on improving student experience and other aspects of university functions; however, it is not clear whether universities are shifting towards a new operating model. This article aims to bridge that gap by suggesting some corporate level strategies that could be considered by universities to future proof from similar shocks. The focus of the article is on public universities involved in teaching and research.

Impact of COVID-19 on the Higher Education Sector and the Australian Economy

As part of the strategy development process, businesses must scan the external environment for opportunities and threats with the aim of exploiting the first and eliminating or minimising the latter (Hitt et al., 2021). The major threat to the HEIs because of the COVID-19 pandemic has been in the form of direct and indirect financial losses. The direct financial losses resulted from the travel restrictions causing a drop in international student enrolments, a major source of income for universities. According to Hurley and Dyke (2020, as cited in Thatcher et al., 2020), the sector is likely to experience a cumulative income loss of AUD 19 billion by 2023. An indirect impact on the sector is anticipated in the form of reduced philanthropic donations (Croucher & Locke, 2020) as businesses suffer income losses due to the pandemic. Thatcher et al. (2020) predict that this may result in reduced research output because of the lack of public and private funding.

They also raise concerns over the post pandemic funding allocation priorities of the Australian government because of the exclusion of the sector in various support packages offered.

Traditional Operating Model in Crisis

In the 20th century, the higher education sector experienced exponential growth owing to the economic justification of ‘human capital theory’ and social justification of equal opportunity, underpinned by the growth of the middle classes (KPMG, 2020). An investment in individuals through formal education (Nerdrum & Erikson, 2001) was linked to economic growth (KPMG, 2020). This led to the growth of fee-paying international students from countries that lacked high quality education facilities into Australia, Canada, UK, and the U.S. (KPMG, 2020). However, this has changed markedly in the last decade with consistently shrinking funding, and the new focus on job-ready graduates funding package. Thus far, the gap between the funding and costs has been bridged by the income generated from international students. The reduction in funding, coupled with rising costs of delivering degrees, inefficient administration, and the inability to scale a face-to-face delivery model are contributing to the financial crisis highlighted by the pandemic (Thatcher et al., 2020). Another factor plaguing the sector is the Baumol cost disease syndrome (KPMG, 2020), where the increase in staff wages is not correlated to an increase in productivity. COVID has exposed the financial vulnerability of the sector, highlighting that the traditional operating model of universities is in crisis (KPMG, 2020).

Post-COVID Education Landscape

Although COVID has wreaked havoc in the higher education sector, scholars project that there will be several growth areas requiring skilled personnel, as well as opportunities for upskilling, reskilling and retraining people who lost jobs during the pandemic (Evans-Greenwood et al., 2015; PWC, 2020). There is expected to be a focus on vocational courses (KPMG, 2020) with a high likelihood of jobs at the end. There will be more interest in shorter courses and degrees. Stackable qualifications (Evans-Greenwood et al., 2015; EY, 2021) are anticipated to become popular where students would only study a subject or two at a time instead of enrolling in a whole degree. Students may keep coming back as and

when they require a new skill resulting in a more ‘just-in-time skill’ approach to education (Evans-Greenwood et al., 2015). This would also mean a rise in micro-credentialling (Evans-Greenwood et al., 2015; EY, 2021; KPMG, 2020; PWC, 2020). As an outcome of these anticipated changes, the income for universities would be more fragmented rather than a chunk for each student completing a qualification.

Proposed Model

The strategic plans and models proposed for the next few years will be the key to the success or failure of institutions. Several management consultancies and scholars (Howard, 2021; KPMG 2020; PWC, 2020) have proposed scenarios to develop robust strategic plans. The one discussed in this article is aligned with the framework proposed by Price Waterhouse Coopers (PWC) called “Mobilise, Stabilise, and Strategise” (PWC, 2020) in relation to the short-, medium- and long-term strategies.

In the short-term, the focus is on survival by addressing immediate challenges (Hitt et al., 2021) and as such the sector mobilised to cope with the impact of the pandemic by swiftly pivoting to online delivery and streamlining operations by reducing employee costs that account for about 57% of the total expenses (Thatcher et al., 2020).

The medium-term goal for universities would be to stabilise (PWC, 2020) positions which have been affected by revenue decline due to the pandemic (Hitt et al., 2021). The lack of stability due to the exclusion from the federal support package was compensated for by the state governments. For example, the New South Wales (NSW) government offered commercial loans to the universities to address COVID related challenges (Thatcher et al., 2020).

Moving forward to further stabilise its position, the sector would need to diversify the international student pipeline, as currently most of the students arrive from five countries, where China is one of the biggest markets (Thatcher et al., 2020). However, based on the current tension between China and Australia there is a likelihood that not as many Chinese students will be coming to Australia for higher education. Also, countries such as China and India are aiming to retain students domestically by improving higher education facilities (KPMG, 2020).

With the changes in the funding model, there is a need to look for alternative sources of income (PWC, 2020) as well as improve operational efficiencies. Over the years, universities have changed methods of operation by acting like corporations (Howard, 2021) with students as customers, and as such, need to further streamline operations to improve efficiency, just like any other industry (Howard, 2021; Thatcher et al., 2020).

For the long-term, universities need to strategise (PWC, 2020) to adapt to the ‘new normal’ post-pandemic (Hitt et al., 2021). Any robust strategy should be based on good ‘what if’ scenarios (Verity, 2003) imagining a variety of future situations and preparing for it. That way organisations are prepared for good as well as bleak future scenarios. In the current unstable environment, several management consultancies have projected a range of extreme scenarios for which universities should prepare.

‘What If’ Scenarios

To develop a robust long-term strategy, it is essential to question the age-old assumptions and develop some ‘what if’ scenarios. To date, universities have depended on the previous good times continuing (KPMG, 2020). EY (2021) have projected the following scenarios:

1. What if the demand for international education may have already peaked?

As vaccinations increase and restrictions decrease, international students will be able to come to Australia, which is what the sector is lobbying for. However, the projection is that the numbers may never return to the pre-COVID levels or as projected by Li and Haupt (2021, as cited in Chan, 2021) take years to recover. The demand for international education may have already peaked.

2. What if the demand for traditional education has already peaked?

The linear nature of education may also be coming to an end, where students went from high school to university to a job; instead, students may be taking a job straight after high school instead of investing in a 3–4 year degree.

3. What if the traditional classroom is ‘dead’?

Digital native students are already consuming content differently compared to the previous generations. It is anticipated that future students will be consuming content online rather than sitting in face-to-face classes, impacting the traditional ‘classroom’ model.

4. What if the workplace is the new university?

If students choose to take a job straight after high school, it would be up to the employers to provide training, as required.

5. What if the government funds the students directly?

What if the federal government funding goes to students directly, instead of to universities, how would the sector cope with that?

Areas of Focus

The sample ‘what if’ scenarios outlined in the previous section are key when developing a robust strategy for the future and protecting the sector from future shocks. There are three key areas that must be considered when developing long-term strategies. The core purpose of universities is to train the future workforce of the country, as such, teaching (Rubin, 2013) is one of the key focus areas for any university. This is followed by research (Rubin, 2013), which is essential for generating new knowledge for the benefit of society, and global rankings. Followed by the capital assets, such as, buildings. Moving forward, a clear strategy is required for each area.

Teaching

Teaching encapsulates the dissemination of old and new knowledge to society (KPMG, 2020). The key factors impacting this area are the ‘students as customers’ mentality, limited domestic and international student pipelines, the limitation of face-to-face delivery models to increase the reach and market share (KPMG, 2020), and the emergence of new student mobilities (Ghosh et al., 2021).

To ensure survival, universities must attract students, because if there are no students there are no universities. This closely links with the projected 1, 2, 3 ‘what if’ scenarios. Some key factors to consider when developing a strategy for this area are the changing demographics of university students, attracting students from more varied sources, embracing technology-based models to scale up delivery, and re-look at new delivery models as suggested by Ghosh et al. (2021) to address student mobility challenges.

In teaching the future generations, it is important to note that we are now in the ‘age of customers’ (KPMG, 2020), changing the age-old power dynamic between a university and its students. Thus, student experience would be a key differentiating factor to attract enrolments (KPMG, 2020). The ‘what if’ scenario

5 where, potentially, the government may fund students directly, can only be addressed by excellent student experience. This is evident in the strategic plans proposed by several universities, where the student experience is at the core of its operations (Macquarie University, 2020).

Simultaneously, it is important to diversify the domestic and international student pipelines (KPMG, 2020). The ‘widening participation’ (Bradley et al., 2008) agenda is contributing towards it on the domestic front. In relation to international student enrolments, a new strategy is required to address the over-reliance on a few countries. Another recommended approach to international education is the Transnational Education (TNE) where institutions and academics go to the students instead of students travelling overseas (Chan, 2021; Schüller, 2020; Ghosh et al., 2021) thereby making education affordable.

Technology driven models to scale up education must be embraced (KPMG, 2020). The new generation of digital natives (Kesharwani, 2020), who have grown up with social media, choose to consume content differently from the previous generations, for example, Tik Toks, or Netflix types of business models. Technology platforms such as Straighterline and Udemy (Gallagher & Palmer, 2020) are already capitalising on these new models. And just as technology opens the market reach by allowing universities to reach remote students, conversely, it increases exposure to competition from international providers, which means universities would have to make extra efforts to stand out.

Research

Historically, universities have been responsible for generating new knowledge via research and progressing society (EY, 2021). Research has been the key factor in achieving high global rankings that have a flow-on effect of attracting international students and funding (KPMG, 2020). This area relates to ‘what if’ scenarios 2 and 4.

In the post-COVID landscape, research will be important to drive innovation and the growth of the nation (PWC, 2020). However, the new Job-ready Graduates Package is aimed only at funding the cost of teaching (Howard, 2021). This creates a gap for funding research that may be addressed through sponsorship from industry partners (EY, 2021). Universities would need to be more self-sustaining, thus, any in-house innovations would have to be commercialised to gain financial returns. Universities could set up innovation hubs and incubation

centres to promote innovation, especially in regional areas (EY, 2021). Strong university-industry partnerships will be helpful to address ‘what if’ scenarios 2 and

Buildings

The main reason that the sector missed out on a support package from the federal government is because universities are asset rich; however, these assets are not contributing towards income for the universities (Howard, 2021). These assets have been the cornerstone of competitive advantage for universities, however, now pose a challenge in view of redeployment and can become a liability (Hitt et al., 2021). Therefore, it is essential to re-evaluate the use of the buildings, which means either selling or repurposing. Although, there will still be a need for face-to-face teaching and an on-campus experience for students, it may not be in the traditional form. Also, future students are more likely to study online and only come to campus for short stints. Thus, massive campuses would have to be re-imagined away from traditional places to learn. Universities could develop partnerships with industry to share spaces. The rooms and buildings could be repurposed for industry and community involvement (Howard, 2021; PWC, 2020) with the aim of “transforming communities” (Ofoyuru, 2018 as cited in Bekele & Ofoyuru, 2021).

The strategies for research and buildings together will help forge university and industry partnerships. This will help to address ‘what if’ scenario 4, where universities could train the staff of industry partners and have an arrangement for students to be employed with those partners.

Possible Strategies – A Comparison With the Aviation Industry

The goal for universities would be to stabilise in the short-term and strategise to capture a decent share of the post pandemic growth market; however, the question is whether each university can develop and action the above-mentioned suggested strategies, independently, within a short time. The speed with which universities react would determine who survives and thrives, becomes more niche, or perishes. The top-ranking universities are expected to manage owing to its ‘brand’ value (Bradley, 2020). However, the institutions in the lower and middle band (Lester, 2018) should evaluate the ability to forge ahead independently or look for alternatives. This may require more entrepreneurial strategies (Hitt et al., 2020, as cited in Hitt et al., 2021) at corporate level, such as “strategic alliances, mergers, and acquisitions” (Jofre, 2011, p. 39). Alliances among universities have

already been seen in the form of global alliances, as well as domestically when applying for research grants (Lester, 2018). It may be time to envisage alliances domestically in delivering qualifications.

Some potential strategies for the HE sector have been identified from what happened in the aviation industry. In the 1990s, the major airline companies, aka ‘legacy carriers’, faced challenges including increased compliance costs and competition from low-cost ‘no-frills’ carriers (Croucher & Locke, 2020; SIA Partners, 2018). This scenario is comparable to what the large, established universities are experiencing in the form of reduced government funding (Howard, 2021), higher compliance requirements after the establishment of the new Tertiary Education Quality and Standards Agency (TEQSA) (Baird, 2013), increased costs of delivery, and competition from low-cost digital delivery options such as the MOOCs (KPMG, 2020). Some of the strategic alliances that evolved among the airline companies have been outlined below and envisioned as to how those models could relate to universities.

Interlining

A commercial agreement between two airlines, servicing a leg of the journey each, where passengers move from one to the other without having to transfer luggage or re-check in (SIA Partners, 2018). Similar collaboration between universities could be seen where students could switch from one provider to another without having to transfer or re-register, ensuring a smooth experience for students while partners manage technicalities in the background. It could also be imagined that one university would deliver content while the other administers assessments. There are similar arrangements seen when expanding overseas with local partners, such as the recent growth in the ‘microcampus’ concept (Ghosh et al., 2021); however, this may become more common on the domestic front.

Codeshare

A commercial arrangement between two or more companies to share the same flight. It improves the choice of flights for customers, and enhances market reach for organisations (SIA Partners, 2018). Similarly, a conglomerate of universities could deliver a qualification or multiple qualifications offering a broader choice for students. A future where a qualification is delivered via a platform where each member contributes a share of students and delivers various

parts of the course. A movement in that direction is already seen in the courses offered via MOOCs (Lester, 2018).

Joint Ventures

Joint Ventures have been successfully used by airline companies to overcome barriers to entry in new markets by sharing the capital and risks (SIA Partners, 2018). This is also seen in the HE sector when it comes to global alliances for expanding into new markets. Domestically, it is seen in the case of speciality qualifications, for example, the joint medical program offered by Charles Sturt University and Western Sydney University (Charles Sturt University, 2022). We could anticipate similar joint ventures when offering a range of qualifications, not just specialist ones.

Value alliance

The previous strategies mentioned were adopted by the legacy carriers when faced with competition from low-cost flight companies. However, now the ‘no-frills’ carriers have also developed a model for improving efficiency called the ‘value alliance’ focused on distribution and sales. It allows partners to connect sales platforms to sell ancillary services from any of the airlines’ websites. Ancillary services have been stated to cost up to 25% of the turnover of a company (SIA Partners, 2018).

Many organisations, including higher education providers, are moving towards a matrix organisational structure to improve efficiency and reduce administration costs. Can a ‘value alliance’ be envisaged across universities for a further reduction in administrative costs? If universities move towards adopting any of the above strategies, a ‘value alliance’ would seem like a natural progression.

Mergers/shutdowns

There is already a concern raised by many that the higher education sector in Australia is suffering from oversupply (Bradley, 2020; Howard, 2021). It is expected to result in mergers (Howard, 2021) consolidating the market. However, there may be some institutions that may not survive the financial crisis and shutdown (Evans-Greenwood et al., 2020), like what was seen in the aviation industry.

Limitations

Although a comparison of the higher education sector and that of the aviation industry is presented here to recommend potential strategies based on the commonalities between the two sectors, it is acknowledged that there are some key differences. The main difference is that the aviation industry is driven by the Neo-liberal Market Model (NLMM) where the focus is on commercialisation and shareholder profit whereas the higher education sector is driven by the New Public Management (NPM) model where the sector has intrinsically been about the public good and therefore not impacted by the same factors (Marginson, 2013). This is acknowledged as the weakness of the analysis presented.

Conclusion

A review of the challenges facing the higher education sector shows that these are an outcome of a range of issues, and not just the impact of the pandemic. HE institutions have experienced exponential growth in the last century and have overcome financial challenges through international education; however, the sector is now undeniably on the cusp of massive change. While COVID has exacerbated the challenges, it has also created a great opportunity for growth and a chance of redefinition for universities. Carefully crafted strategic plans based on strong ‘what if’ scenarios are essential for individual institutions to survive and thrive. The strategic plans based on the model recommended by PWC (2020) of ‘Mobilise, Stabilise, Strategise’ has been suggested to develop short-, medium-, and long-term strategies, along with the ‘what if’ scenarios suggested by EY (2021). The best way for the sector to cope with this upheaval and come out stronger would be to look at the strategies adopted by other sectors. The strategies adopted in the aviation industry have been recommended in this article as a way forward. However, there are other industries the sector could imitate to ride this wave of extreme change. Whatever approach universities adopt to cope with these challenges, it is certain that future universities will not look like what we have been used to, but rather are expected to be thriving industry and community hubs, defining a new chapter in higher education.

References

- Baird, J. (2013). TEQSA and risk-based regulation: Considerations for university governing bodies. *The Australian Universities' Review*, 55(2), 72–79.
<https://files.eric.ed.gov/fulltext/EJ1016859.pdf>
- Bekele, T. A., & Ofoyuru, D. T. (2021). Emerging university-society engagements in Africa: An analysis of strategic plans. *Journal of Comparative & International Higher Education*, 13(1), 151-180.
- Bradley, D. (2020). *Reinventing the university business model: opinion*.
<https://www.campusreview.com.au/2020/09/reinventing-the-university-business-model/>
- Bradley, D., Noonan, P., Nugent, H., & Scale, B. (2008). *Review of Australian higher education: Final report*. Commonwealth of Australia.
<http://hdl.voced.edu.au/10707/44384>
- Chan, R. Y. (2021). Understanding international joint and dual degree programs: Opportunities and challenges during and after the COVID-19 pandemic. *Journal of Comparative & International Higher Education*, 13(5), 86-107.
- Charles Sturt University. (2022). CSU/WSU joint program in medicine.
<https://www.csu.edu.au/division/facilitiesm/projects/details/orange/csuwsu-joint-program-in-medicine>
- Croucher, G. & Locke, W. (2020). *A post-coronavirus pandemic world: some possible trends and their implications for Australian higher education*.
https://melbourne-cshe.unimelb.edu.au/_data/assets/pdf_file/0010/3371941/a-post-coronavirus-world-for-higher-education_final.pdf
- CUNY. (2021). *Zero textbook cost guidelines*. <https://www.cuny.edu/libraries/open-educational-resources/guidelines-for-zero-textbook-cost-course-designation/>
- Evans-Greenwood, P., O'Leary, K., & Williams, P. (2015). *The paradigm shift: Redefining education*. Centre for the Edge, Deloitte Australia. [Google Scholar](#)
- EY. (2021). *The peak of higher education – a new world for the university of the future*.
https://www.ey.com/en_au/government-public-sector/the-peak-of-higher-education
- Gallagher, S., & Palmer, J. (2020). *The pandemic pushed universities online. The change was long overdue*. <https://hbr.org/2020/09/the-pandemic-pushed-universities-online-the-change-was-long-overdue>
- Ghosh, S., Lee, J., & Haupt, J. (2021). Understanding the attraction of the microcampus: A quantitative investigation of students' motivations to enroll in transnational education. *Journal of Comparative & International Higher Education*, 13(5), 53-71.
- Hitt, M. A., Arregle, J. L., & Holmes Jr, R. M. (2020). Strategic management theory in a post-pandemic and non-ergodic world. *Journal of Management Studies* 58(1).
- Howard, J. H. (2021). *Rethinking Australian higher education: towards a diversified system for the 21st century*. <https://www.howardpartners.com.au/rethinking-higher-education.html>
- Jasper, M., & Crossan, F. (2012). What is strategic management? *Journal of nursing management*, 20(7), 838-846.

- Jofre, S. (2011). *Strategic Management: The theory and practice of strategy in (business) organizations*. DTU Management.
- Kesharwani, A. (2020). Do (how) digital natives adopt a new technology differently than digital immigrants? A longitudinal study. *Information & Management*, 57(2).
- KPMG. (2020). *The future of higher education in a disruptive world*.
<https://home.kpmg/xx/en/home/industries/government-public-sector/education/the-future-of-higher-education-in-a-disruptive-world.html>
- Lester, M. (2018, June 27). How online can learn from the airline industry. *Inside Higher Ed*. <https://www.insidehighered.com/digital-learning/views/2018/06/27/what-online-education-can-learn-airline-industry-opinion>
- Macquarie University. (2020). *University operating plan 2020–2024*.
<https://www.mq.edu.au/about/about-the-university/vision-strategy/operating-plan-2020-2024>
- Marginson, S. (2013). The impossibility of capitalist markets in higher education. *Journal of Education Policy*, 28(3), 353-370. DOI: 10.1080/02680939.2012.747109
- Nerdrum, L., & Erikson, T. (2001). Intellectual capital: a human capital perspective. *Journal of intellectual capital*, 2(2), 127-135.
- OER Commons. (2021). *Explore. Create. Collaborate*. <https://www.oercommons.org>
- OERu. (2021). Enabling education around the globe. <https://oeru.org/>
- Purcell, W.M., & Lumberras, J. (2021). Higher education and the COVID-19 pandemic: navigating disruption using the sustainable development goals. *Discover Sustainability* 2(6).
- PWC. (2020). Where next for tertiary education? How the COVID-19 crisis can be the catalyst to reboot towards a stronger sector.
<https://www.pwc.com.au/government/where-next-for-tertiary-education.pdf>
- Rubin, B. (2013). University business models and online practices: A third way. *Online Journal of Distance Learning Administration*, 16(1), n1.
<https://eric.ed.gov/?id=EJ1004008>
- Sammut-Bonnici, T., & Galea, D. (2014). PEST analysis. In *Wiley Encyclopedia of Management Online*.
- Schüller, J. (2020). Exploring labor market outcomes at binational universities: Two countries, one university, binational careers? *Journal of Comparative & International Higher Education*, 12(6S1).
- SIA Partners (2018). *Partnerships between airlines: the strategy to win the Asian market*.
https://www.sia-partners.com/system/files/document_download/file/2020-06/siapartners_partnerships_between_airlines_the_strategy_to_win_the_asian_market.pdf
- Thatcher, A., Zhang, M., Todoroski, H., Chau, A., Wang, J., & Liang, G. (2020). Predicting the impact of COVID-19 on Australian universities. *Journal of Risk and Financial Management*, 13(9), 188. <https://www.mdpi.com/1911-8074/13/9/188>
- Verity, J. (2003). Scenario planning as a strategy. *European Business Journal*, 5(4), 185-195.

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